ABSTRACT# 11

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Title: Association Of Vaping And Respiratory Health Among Youth In The Population Assessment Of Tobacco And Health (PATH) Study Wave 3
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BACKGROUND: As of January 2020, a total of 2,668 e-cigarette/vaping product use-associated lung injury (EVALI) cases or deaths have been reported to CDC. Approximately 15% of patients were under 18 years old proving to be a public health threat to youth. The purpose of this study is to examine the association between vaping and related respiratory symptoms among youth.

METHODS: We used The Population Assessment of Tobacco and Health (PATH) study wave 3 data collected among youth from October 2015 to October 2016 with 9,750 respondents. Univariable and multivariable logistic regression models were used to estimate the unadjusted and adjusted association between electronic nicotine product (ENP)/vaping in the past 12 months, and whether the subject experienced one of the following respiratory outcomes in the past 12 months wheezing/whistling; chest sounded wheezy during or after exercise; dry cough at night; subject told by a health professional that he/she has asthma. Additionally, those diagnosed with asthma were asked whether they used a quick-relief inhaler and/or controller/long-acting inhaler in the past 12 months. The multivariable models were adjusted for age, sex, race/ethnicity, parent education, and use of cigarettes, cigar, hookah and blunt use in past 12 months.

RESULTS: Among the 9,750 youth participants, 1105 (12%) used ENP’s in the past 12 months. After adjusting for covariates, wheezing/whistling and number times wheezing were associated with ENP use (p<0.05). The adjusted odds of reporting wheezing/whistling were 31% (95% CI 6%-61%) higher in those who used ENP than in those who did not use ENP (AOR=1.31, p=0.01). The adjusted odds of reporting wheezing 4 to 12 times rather than no wheezing were 70% higher in those who used ENP than in those who did not use ENP (AOR=1.70, 95% CI 1.01-2.86, p=0.046). There was no evidence of an association between ENP use and a diagnosis of asthma, long-acting inhaler use, quick-relief inhaler use, exercise-induced wheezing or dry cough at night.

CONCLUSIONS: After adjusting for demographics and other tobacco use, vaping was associated with a significantly increased risk of wheezing. These results add to the evidence that vaping continues to be a public health threat among youth.

Word Count: 350